

divisional applications. Claims 18-22 are currently examined on the merits.

Support for the amendments is as follows.

Support for amended claim 19 is found on page 11, lines 17-20.

Support for amended claim 20 is found on page 21, lines 14-17.

No new matter is added by any of these amendments.

Priority

The Examiner noted that the first sentence of the specification incorrectly indicated the parent application to which the instant application is a divisional. The specification has been amended to correctly indicate the parent application of the instant divisional application. Thus, the basis for this objection is overcome. Withdrawal of the objection is respectfully requested.

Rejections under 35 U.S.C. § 112, first paragraph

The Examiner rejected claims 18-22 under 35 U.S.C. § 112, first paragraph as being lack of enablement. The Examiner was not able to find support for the limitations included in those claims such as the recitation of 16, 30, 60 contiguous nucleotides, and 90% sequence identity. Applicants respectfully traverse.

As amended, independent claim 20 recites a probe of at least 15 contiguous nucleotides, which is adequately taught in the specification on page 21, lines 14-17.

Similarly, claims 21 and 22 are fully supported in the specification on page 21, lines 14-17, where Applicants teach that the length of the probe can be 30, or 60 nucleotides.

Claim 19 has been amended to recite a polynucleotide encoding an amino acid sequence having at least 90% sequence identity to SEQ ID NO:1, which is fully disclosed and taught on page 11, lines 17-20.

In light of the above amendments and remarks, it is evident that the claimed invention is fully and adequately described in the specification. Thus, the rejection under 35 U.S.C. § 112, first paragraph is overcome. The Examiner is respectfully requested to withdraw this rejection.

Rejections under 35 U.S.C. § 102

The Examiner rejected claims 18-22 under 35 U.S.C. § 102 (b), as being anticipated by Yang et al. The Examiner argued that Yang et al. teaches a cDNA encoding bovine pyrophosphatase which is allegedly more than 90% identical to SEQ ID NO:2, and comprises 16, 30, and 60 contiguous nucleotides thereof. Thus, the Examiner alleged that claims 18-22 are anticipated by Yang et al. Applicants respectfully traverse.

It is well settled in patent law that a reference is anticipating under 35 U.S.C. § 102 (b) only if **all** elements of the claimed invention are disclosed in the reference. *In re Paulsen*, 31 USPQ2d 1671, 1673 (Fed. Cir. 1994). Although SEQ ID NO:1 and the bovine pyrophosphatase share 95% identity, Yang et al. does not disclose the nucleic acid sequence of SEQ ID NO:2, and thus fails to anticipate claims 18-22. In fact, the Examiner has made no direct comparison between SEQ ID NO:2 and the nucleotide sequence of the bovine pyrophosphatase. In addition, Applicants respectfully point out that there are at least three distinct regions of nucleotide sequence in which the claimed sequence differs from that of Yang et al. These regions and their differences are shown in Fig. 2 as the polypeptide HPYP residues M₁ to T₆, G₁₃₃ to V₁₃₈, and K₂₂₁ to K₂₂₈ which are encoded by A₉₁-C₁₀₈, G₄₈₇-G₅₀₄, and A₇₅₁-A₇₇₄ of the claimed nucleotide sequence, respectively, as shown in Fig. 1. Therefore, Applicants respectfully request that the rejection of claims 18-22 under 35 U.S.C. § 102 (b) be withdrawn.

Double Patenting

Claims 18-22 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-5 of US Patent No. 5,843,665. Applicants respectfully traverse.

Claims 18-22 are different from claims 1-5 of the '665 patent in terms of their scope. The claims in the '665 patent cover SEQ ID NO:1 and SEQ ID NO:2, whereas the current claims 18-22 encompass methods of detecting target polynucleotides using SEQ ID NO:2. In fact, the originally filed method of detection claims 17 and 18 were canceled in the Notice of Allowance for the '665 patent for future prosecution. Thus, the double patenting rejection cannot stand, and the Examiner is respectfully requested to withdraw this rejection.

However, in the interest of expediting the prosecution of the instant application, Applicants herein submit a terminal disclaimer, as requested by the Examiner. Thus, this rejection of double patenting is overcome. The Examiner is respectfully requested to withdraw this rejection.

CONCLUSION

In light of the above amendments and remarks, Applicants submit that the present application is fully in condition for allowance, and request that the Examiner withdraw the outstanding objections and rejections. Early notice to that effect is earnestly solicited.

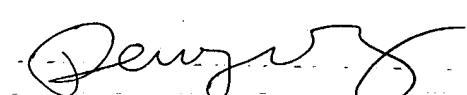
If the Examiner contemplates other action, or if a telephone conference would expedite allowance of the claims, Applicants invite the Examiner to contact Applicants' Attorney at (650) 621-7574.

Applicants believe that no fee is due with this communication. However, if the USPTO determines that a fee is due, the Commissioner is hereby authorized to charge Incyte Pharmaceuticals, Inc. Deposit Account No. 09-0108. This form is enclosed in duplicate.

Respectfully submitted,

INCYTE PHARMACEUTICALS, INC.

Date: 3/23/00


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